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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,019	08/02/2001	Thomas A. Velez	P176	7768

7590 10/08/2003

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EXAMINER

CREPEAU, JONATHAN

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 10/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/921,019

Applicant(s)

VELEZ ET AL.

Examiner

Jonathan S. Crepeau

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11-13 is/are rejected.
- 7) ☒ Claim(s) 9 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Suggestions***

1. In claims 2 and 9, the phrase “said at least a portion of” in line 2 lacks proper antecedent basis. Appropriate correction is suggested, but not required.

### ***Claim Objections***

2. Claim 8 is objected to because of the following informalities: in line 7, “fist” should be “first.” Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 1-105473. Regarding claims 1 and 8, the reference teaches a thermal battery comprising a first housing (11, 12), an electrical energy supplying assembly (batteries 6) for supplying power when heated to an operating temperature within the first housing, a wire heating assembly (15) for heating the batteries to the operating temperature mounted about the first housing, and a second housing (19) mounted about the first housing and the wire heating apparatus (see abstract; Fig.

1). Regarding claims 2 and 3, the second housing (19) contains a first insulation layer (17) wherein the wire heating assembly is mounted therein (see abstract; Fig. 1).

Thus, the instant claims are anticipated.

5. Claims 1-4, 8, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 89/09497. Regarding claims 1 and 8, the reference teaches a thermal battery comprising a first housing (7) made of mica (see Fig. 1; page 2, line 19). An electrical energy supplying assembly (batteries 1) for supplying power when heated to an operating temperature is mounted within the first housing, and a wire heating assembly (7) for heating the batteries to the operating temperature is mounted about the first mica housing (see page 2, line 18). The entire apparatus is enclosed by a second housing (4) (see abstract; Fig. 1). Regarding claims 2 and 3, the second housing contains an insulation layer (3) wherein the wire heating assembly is mounted within the insulation layer (see abstract; Fig. 1). Regarding claims 4 and 11, a means (thermostat) to adjust the level of heating produced by the wire is present in the system (see page 2, lines 8-11).

Thus, the instant claims are anticipated.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1746

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5, 6, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 89/09497 in view of JP 1-260764.

WO '497 is applied to claims 1-4, 8, and 11 for the reasons stated above. Further, the first mica housing (7) of the reference would correspond to the second insulation layer recited in instant claim 6.

WO '497 does not expressly teach that the heating wire is made of nickel-chrome wire, as recited in claims 5 and 12, that the second insulation layer is "ridged" as recited in claim 6, or that the system comprises a means for recharging the electrical energy supplying assembly as recited in claim 13.

JP '764 is also directed to a thermal battery. In the abstract, the reference teaches that the battery has a heating element (10) made of nichrome wire.

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated by the disclosure of JP '764 to use nichrome in the wire of WO '497. As noted above, the disclosure of JP '764 indicates that nichrome is a suitable material for use in a thermal battery heating wire. The selection of a known material based on its suitability for its intended use has generally been held to be *prima facie* obvious. See MPEP §2144.07. Accordingly, the use of nichrome as the heating element of WO '497 would be obvious to a skilled artisan.

Furthermore, the use of a “ridged” mica insulation layer (7) of WO ‘497 would be obvious to a skilled artisan. WO ‘497 teaches that the heating wire is enclosed in the mica layer (see page 2 of the reference). Thus, the mica layer may conform to the heating wire and take its shape. Accordingly, the mica layer would have ridges, as recited in claim 6. It is further noted that changes in shape of an element are generally *prima facie* obvious in the absence of evidence to the contrary (MPEP §2144.04(IV) (B)).

Regarding claim 13, which recites a means coupled to the electrical energy supplying assembly for recharging it, the artisan would find it obvious to use a battery charger to charge the battery of WO ‘497 once the battery capacity has been depleted. Such charging and discharging is cost-effective and allows for multiple uses of the battery. Accordingly, the subject matter of claim 13 is not considered to distinguish over the references.

#### ***Allowable Subject Matter***

8. Claims 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

Claim 9 recites, among other features, that the first housing contains a first insulation layer mounted about at least a portion of the electrical energy supplying assembly. The art of record does not teach or fairly suggest this limitation. WO 89/09497 teaches a first housing (7),

but fails to teach an additional layer of insulation inside this housing. JP 1-105473 also teaches a first housing (11, 12) but fails to teach an additional layer of insulation inside the housing. Accordingly, claims 9 and 10 contain allowable subject matter.

*Conclusion*


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (703) 305-0051. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached at (703) 308-4333. The phone number for the organization where this application or proceeding is assigned is (703) 305-5900. Additionally, documents may be faxed to (703) 872-9310 (for non-final communications) or (703) 872-9311 (for after-final communications).

Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

JSC

September 30, 2003

  
JONATHAN CREPEAU  
PATENT EXAMINER  
ART UNIT 1746